American POLE BARNS

PRE-DESIGNED POST FRAME KITS

INSTALL GUIDE

REVISED 02/04/2020

IMPORTANT INFORMATION

The application and detail drawings in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations. All projects should conform to applicable building codes for that particular area. It is recommended to follow all building regulations and standard industry practices. We cannot be responsible for the performance of the post frame system if it is not installed in accordance with the suggested instructions referenced in this manual. If there is a conflict between this manual and the approved erection drawings, the approved erection drawings are to take precedence. Prior to ordering and installing materials, all dimensions should be verified by field measurements. We reserve the right to modify, without notice, any details, recommendations or suggestions. Any questions you may have regarding proper installation of the Stile roofing system should be directed to your representative. Consult your representative for any additional information not outlined in this manual. This manual is designed to be utilized as a guide when installing post frame building systems. It is the responsibility of the erector to ensure the safe installation of this system.

SAFETY

STUDY APPLICABLE OSHA AND OTHER SAFETY REQUIREMENTS BEFORE FOLLOWING THESE INSTRUCTIONS.

The installation of metal roof systems is a dangerous procedure and should be supervised by trained knowledgeable erectors.

USE EXTREME CARE WHILE INSTALLING ROOF PANELS.

It is not possible for us to be aware of all the possible job site situations that could cause an unsafe condition to exist. The erector of the roof system is responsible for reading these instructions and determining the safest way to install the roof system. These instructions are provided only as a guide to show a knowledgeable, trained erector the correct parts placement one to another. If following any of the installation steps would endanger a worker, the erector should stop work and decide upon a corrective action. Provide required safety railing, netting, or safety lines for crew members working on the roof. Do not use the roof panel as a walking platform. The roof panels will not withstand the weight of a person standing at the edge of the panel. Do not stand on any part of a roof panel until the panel has been completely attached.

CUSTOMER SERVICE

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American BBM POLE BARNS

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MATERIAL RATINGS

Tuff-Rib

Dade County NOA #07-0713.03.03 & ASCE 7-98 Compliant ; Florida Building Code Approval #FL4586.3, #FL6144.3, #FL9610.3 ; Texas Department of Insurance Approval #116 ; UL 790 Fire Resistance Class A ; UL 2218 Impact Resistance Class 4 ; UL 580 Uplift Class 90 Construction #584

Angle Iron Steel Truss

Trusses are made in accordance set forth in Florida and Alabama requirements of a 140-mph wind load and a 20 lbs. per square foot snow load when set on 6x6 posts at 10-foot centers. We use 2x2x3/16 angle for both top and bottom cords with 1x1x1/8 webbing. These trusses are intended for agricultural use.

Tubing Steel Trusses

Tubing trusses are made in accordance set forth in the International Building Code (IBC) ; IBC 2012 ED. CH. 22 & 16 (Structural Design) compliant ; AWS D1.1/D1.1M:2015 Structural Welding compliant.

Perma-Column

ICC Approved ; 2018 & 2015 IBC Compliant ; 2018 & 2015 IRC compliant ; 2017 Florida Building Code -- Building compliant ; 2017 Florida Building Code -- Residental compliant ; 2016 California Building Code compliant ; 2016 California Residential Code compliant.

American BBM POLE BARNS

MATERIALS OVERVIEW

PANELS

The standard panel for our pre-designed Pole Barn Kits is 29ga Tuff-Rib. Each panel has a coverage of 36" and is cut to length. Tuff-Rib is a direct fastened (exposed) system.

FASTENERS

Roofing panels are fastened using a #10 WoodTite Metal-to-Wood Screws

Steel trusses are fastened to posts using a 1/2-13 X 7.00 Grade 2 Carriage Bolt, 1/2 Grade 5 Lock Washer, and 1/2-13 Grade 5 Nut.

Steel trusses are connected using 1/2-13 X 1.50 Grade 5 Bolt, 1/2 Grade 5 Lock Washer, and 1/2-13 Grade 5 Nut.

Collar ties are fastened using 1/2-13 x 3.00 Grade 5 Bolt, 1/2 Grade 5 Flat Washer, 1/2 Grade 5 Lock washer, 1/2-13 Grade 5 Nut.

Sturdi-Wall (Plus) brackets are fastened to post columns using 7" carriage bolts.

Sturdi-Wall brackets are anchored to pad using a 5/8" x 6" concrete anchor.

TRUSSES

Our trusses are engineered from 2"x2"x3/16" angle iron and 1"x1"x1/8" webbing.

In compliance with Alabama and Florida requirements of a 140-mph wind load and 20 psf snow load when set on 6x6 posts at 10' centers.

Live load rating of 20lbs / sq. ft. Snow load rating of 10lbs. sq.ft.
Ultimate Wind Speed rating of 115 mph.

For 50' thru 60' spans, must use an 8x8 post. 6x6 posts are acceptable for trusses under those spans when eave height is 16' or lower.

MATERIALS OVERVIEW

POSTS

Solid 6x6 posts for truss spans under 50'. 8x8 posts for spans 50' thru 60'.

FOUNDATION

Option 1: Post Set On Concrete Footer Pad
Six inch thick concrete pad 14-16 inches in diameter placed 4' below ground level.

Option 2: Post Set In Poured Concrete
Four feet of concrete 14-16 inches in diameter poured around the post.

Option: 3: Wet Set Brackets
Highest strength foundation connection. Pre-welded 1/4" steel bracket installed in wet concrete.

Option 4: Drill Set Brackets
Pre-welded 1/4" steel bracket installed in set concrete using hammer drill and concrete anchors.

Option 5: Perma-Column®
Pre-cast concrete post reinforced with 60,000 psi rebar welded to 1/4" steel bracket. Set on concrete footer pad or composite footer pad.

ROOF PURLINS

Non-treated 2x6x10 dimensional lumber.

POST ANCHOR DETAIL

Option #1

Post set on concrete pad.

Concrete pad is poured below ground level. Post is placed on top of the pad. Post hole is then back-filled. The concrete "cookie" pad should be at least 14'16" in diameter and no less than 6" thick. Approved composite footing pads may also be used in place of pouring a pad. It is not recommended to sit the post directly on soil as moisture could cause the post to sink.

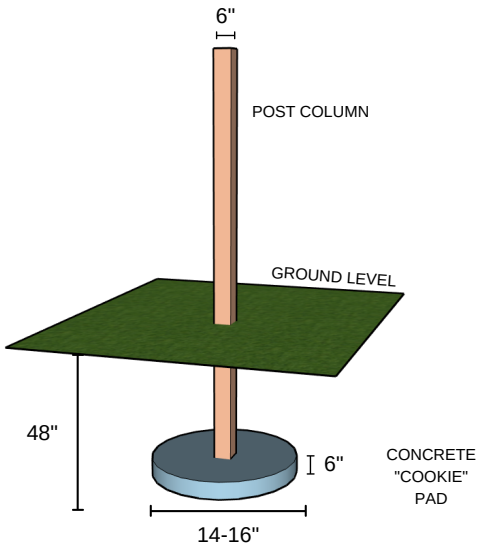


FIGURE #1

Option #2

Post set in poured concrete.

Ground is excalvated to allow for a 4' concrete fill that is 24" in diameter.
Post is set in ground and concrete is then poured. Care must be taken for moisture to not get trapped between concrete fill and the post. Should moisture get trapped, rapid post decay may occur. Post protectors can resist post decay.

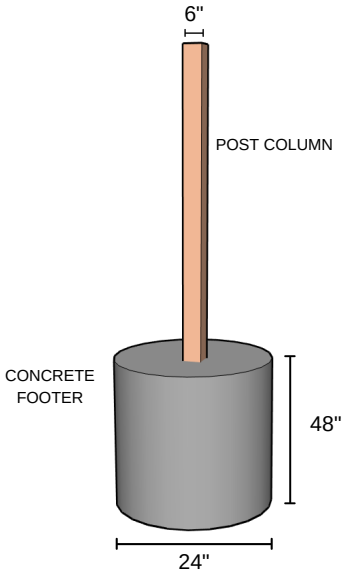


FIGURE #2

POST ANCHOR DETAIL

Option #3

Sturdi-Wall Plus wet set brackets.

Use these brackets when pouring a new concrete pad.

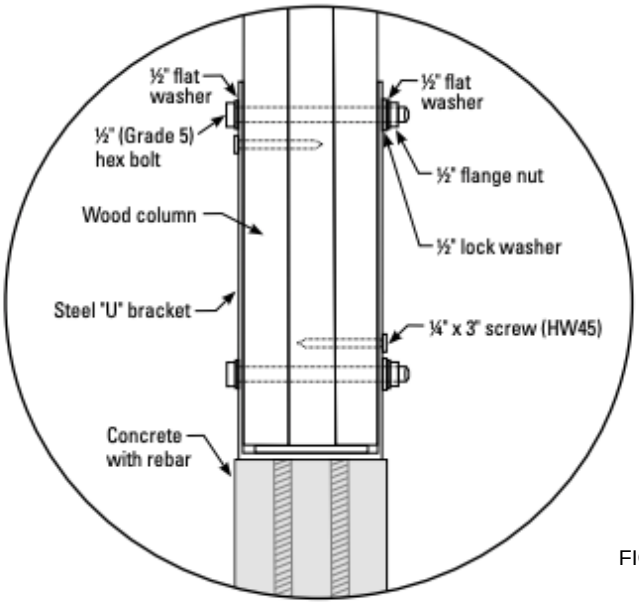


FIGURE #3

Option #4

Sturdi-Wall drill set brackets.

Use these brackets when attaching posts to an existing concrete pad.

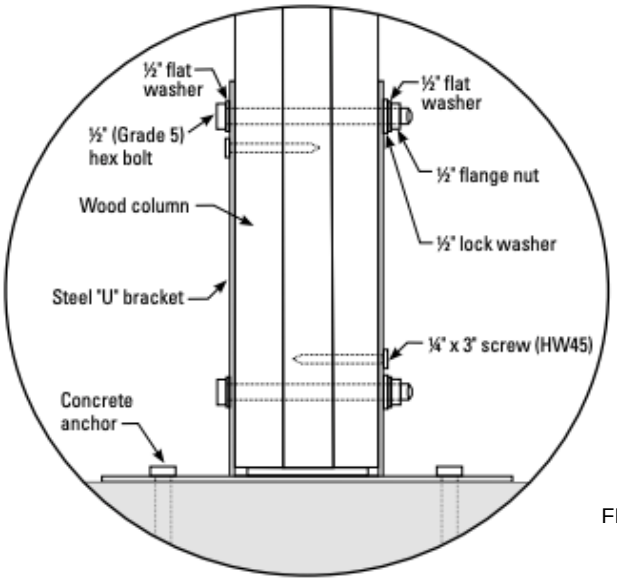


FIGURE #4

POST ANCHOR DETAIL

Option #5

Pre-cast Perma-Column.

The Perma-Column columns are factory manufactured precast reinforced concrete columns with a steel “U” shaped bracket on the top for attachment to a wood post or laminated wood column. The column protrudes above finish grade, to allow for the attachment of a wood post or laminated wood column. See Figure 1 for an illustration of a typical Perma-Column column.

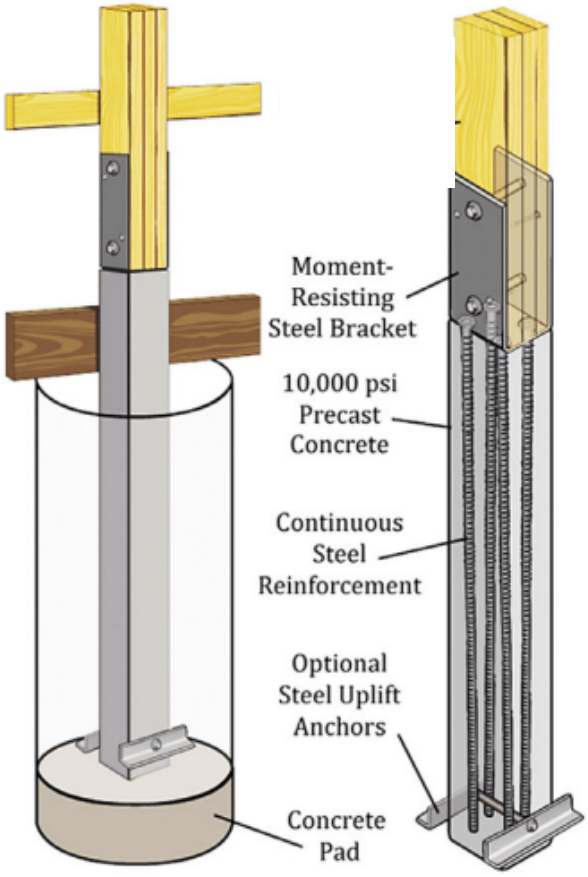


FIGURE #5

POST COLUMN LAYOUT

If posts are being set in ground, set a string line to mark your post holes. Once holes have been augured, use a temporary board to suspend your posts and ensure the building is square. If you are using solid posts ensure any crown or bow is facing the inside of the building. Once the posts are set you can prepare your footer and backfill to grade.

Detail #6 depicts the side elevation post column layout for a 30'w x 12'h structure. Posts should be spaced no more than 10' apart. If it necessary to have a wider bay, a header truss must be used.

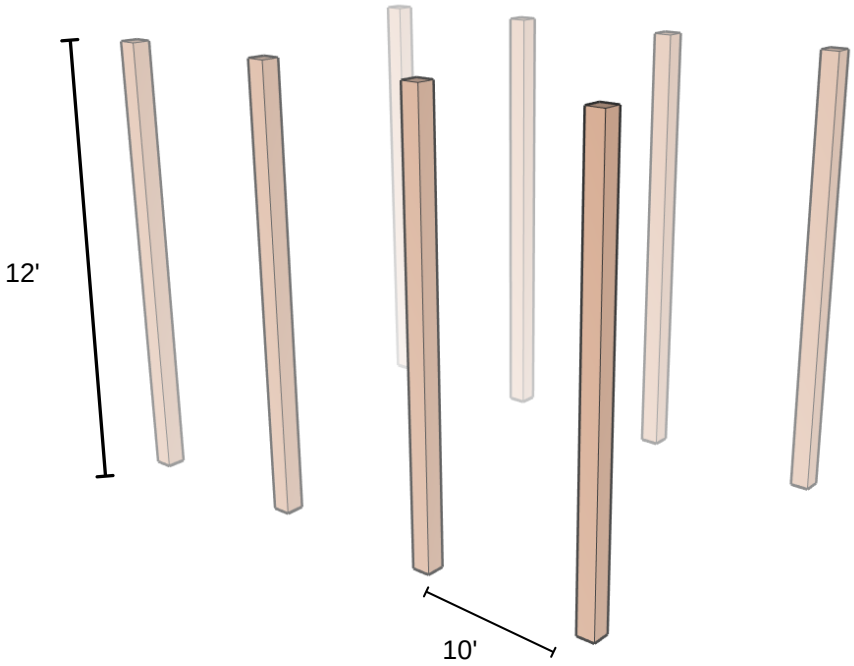


FIGURE #6

POST COLUMN PLACEMENT

If posts are being set in ground, set a string line to mark your post holes. Once holes have been augured, use a temporary board to suspend your posts and ensure the building is square. If you are using solid posts ensure any crown or bow is facing the inside of the building. Once the posts are set you can prepare your footer and backfill to grade.

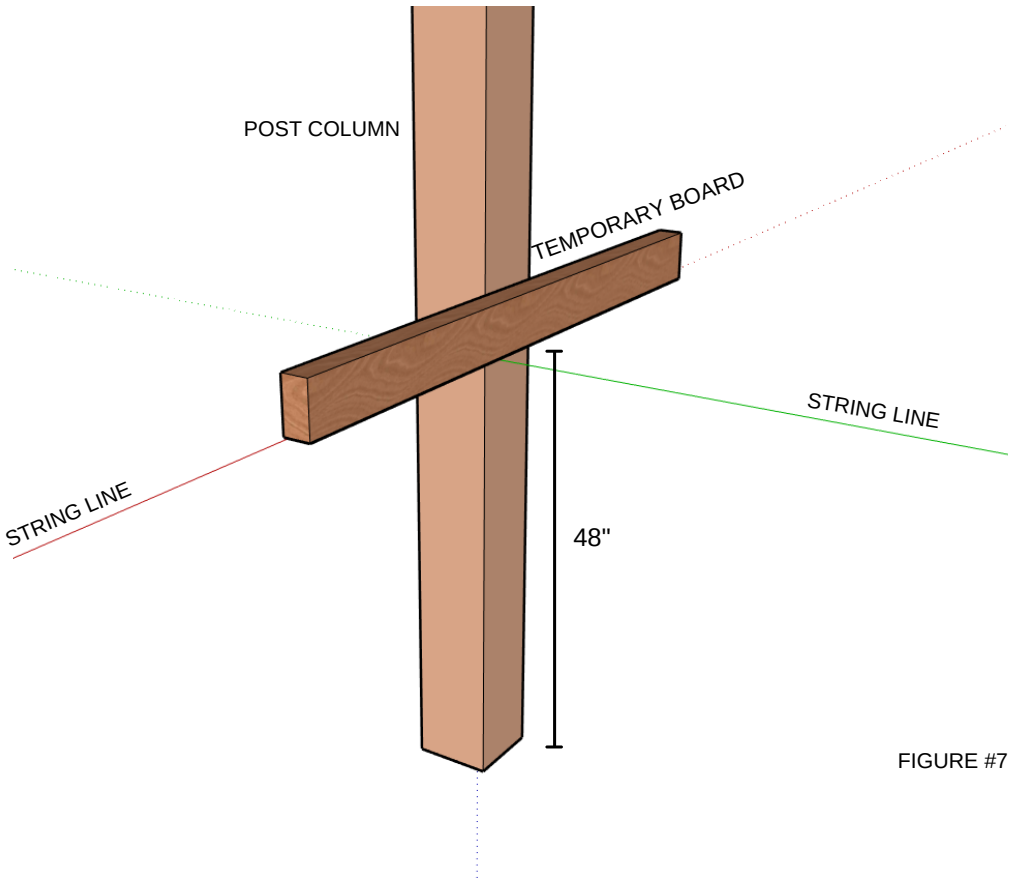


FIGURE #7

STEEL TRUSS ATTACHMENT

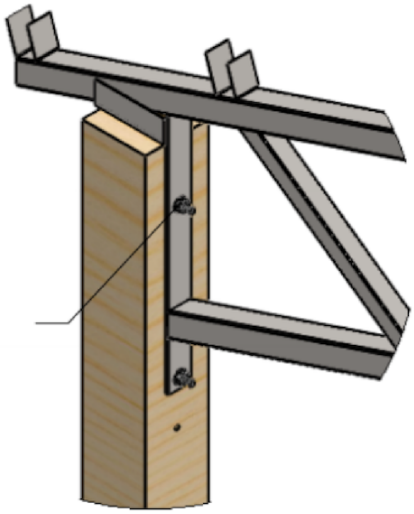
We use angle iron trusses with our pole barn kits. The truss is mounted on the post column by sitting the truss post platform on the of the post as shown in Detail #8.

The truss is secured to the post using (2) 7" Grade 2 Carriage Bolts that are supplied with your kit (as shown in Detail #9).

These steel trusses are in full compliance with Florida and Alabama wind and snow load requirements.

Steel trusses can expand and contract according to the environments temperature. Tolerances within .50 are acceptable.

FIGURE #8



1/2-13 x 7.00
GRADE 2 CARRIAGE BOLT

1/2 GRADE 5 LOCK WASHER

1/3-13 GRADE 5 NUT

FIGURE #9

ROOF PURLIN ATTACHMENT

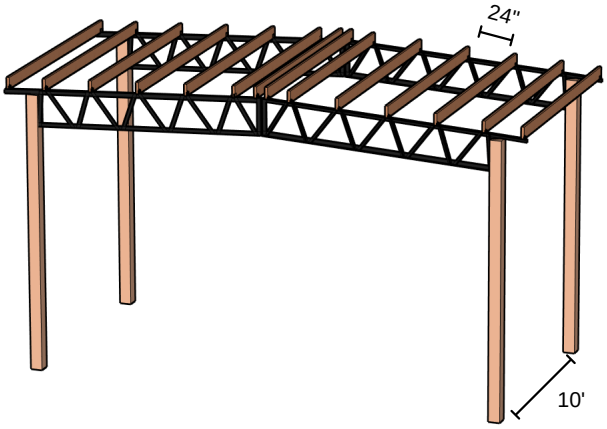


FIGURE #10

The steel trusses come with pre-welded purlin buckets (or "cups" spaced every 24". The buckets are pre-drilled for easy attachment.

Place the 2x6 purlin in the bucket and secure using provided EnduraFast fasteners as shown in Figure #10 and Figure #11.

FIGURE #11

ROOF PANEL INSTALLATION

STORAGE

If metal is not to be used immediately, store inside in a well ventilated, dry location. Condensation or other moisture can form between the sheets during storage causing water stains or white rust which detract from the appearance of the product and may affect the product's useful life. Trapped moisture between sheets of painted metal can cause white rust to form under-neath the paint. This can cause the paint to flake off the panel immediately or several years later. To prevent white rust and staining, break the shipping bands on the material. Store the material on end or on an incline of at least 8" with a supporting board underneath to prevent sagging. Fan the sheets slightly at the bottom to allow for air circulation. Keep the sheets off of the ground with an insulator such as wood. Any outdoor storage is at the customer's own risk. If outdoor storage cannot be avoided, protect the metal using a canvas cover or waterproof paper. Never cover the metal with plastic as this will cause condensation to form. Some Safety Precautions Always wear heavy gloves when working with steel panels to avoid cuts from sharp edges. When cutting or drilling steel panels, always wear safety glasses and sweep off any metal shavings immediately to prevent eye injury from flying metal fragments. If you must walk on a metal roof, take great care. Metal panels can become slippery, so always wear shoes with non-slip soles. Avoid working on metal roofs during wet conditions when the panels can become extremely slippery. Walking or standing on a metal roof which does not have a plywood or other deck beneath it is not recommended. However, if you must do so, always walk on the purlins, never between.

GENERAL INSTALLATION INFORMATION

Insure that the structure is square and true before beginning panel installation. If the structure is not square, the panels will not properly seal at the sidelaps. Start the first panel square to eave by using 3, 4, 5 Triangle Method. Green or damp lumber is not
recommended. Moisture released from the damp lumber may damage the metal panels. Nails installed in green or damp lumber may back out. Remove any loose metal shavings left on the roof surface immediately to prevent corrosion. After installing roof, remove any debris such as leaves or dirt to prevent moisture from getting trapped on panels. Do not install in direct contact with chemically treated lumber.

FASTENING

If you wish to predrill fastener holes, use a cover sheet to prevent hot shavings from sticking to panels. Screws - For best results, use a 1-1/2" double washered wood screw in the flat of the panel as shown in the illustration below. Fasteners should be applied at every purlin. Drive the fastener so that the washer is compressed securely against the metal. Do not over drive the fastener as this will form a dimple that can collect water and cause leakage. Do not leave any loose fasteners that have missed the purlin. Use a #14 stitch screw or caulk to fill the
hole.

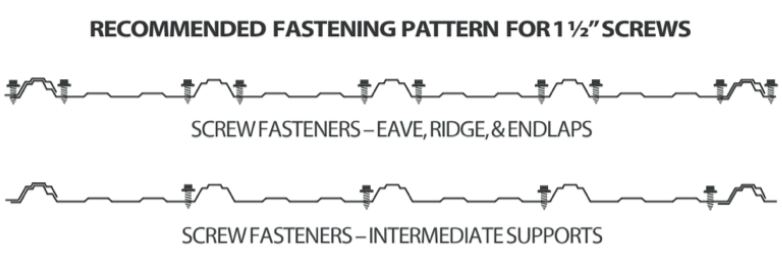


FIGURE #12

ROOF PANEL INSTALLATION

Install the Tuff-Rib roofing panels from left to right as shown in Figure #13 below.

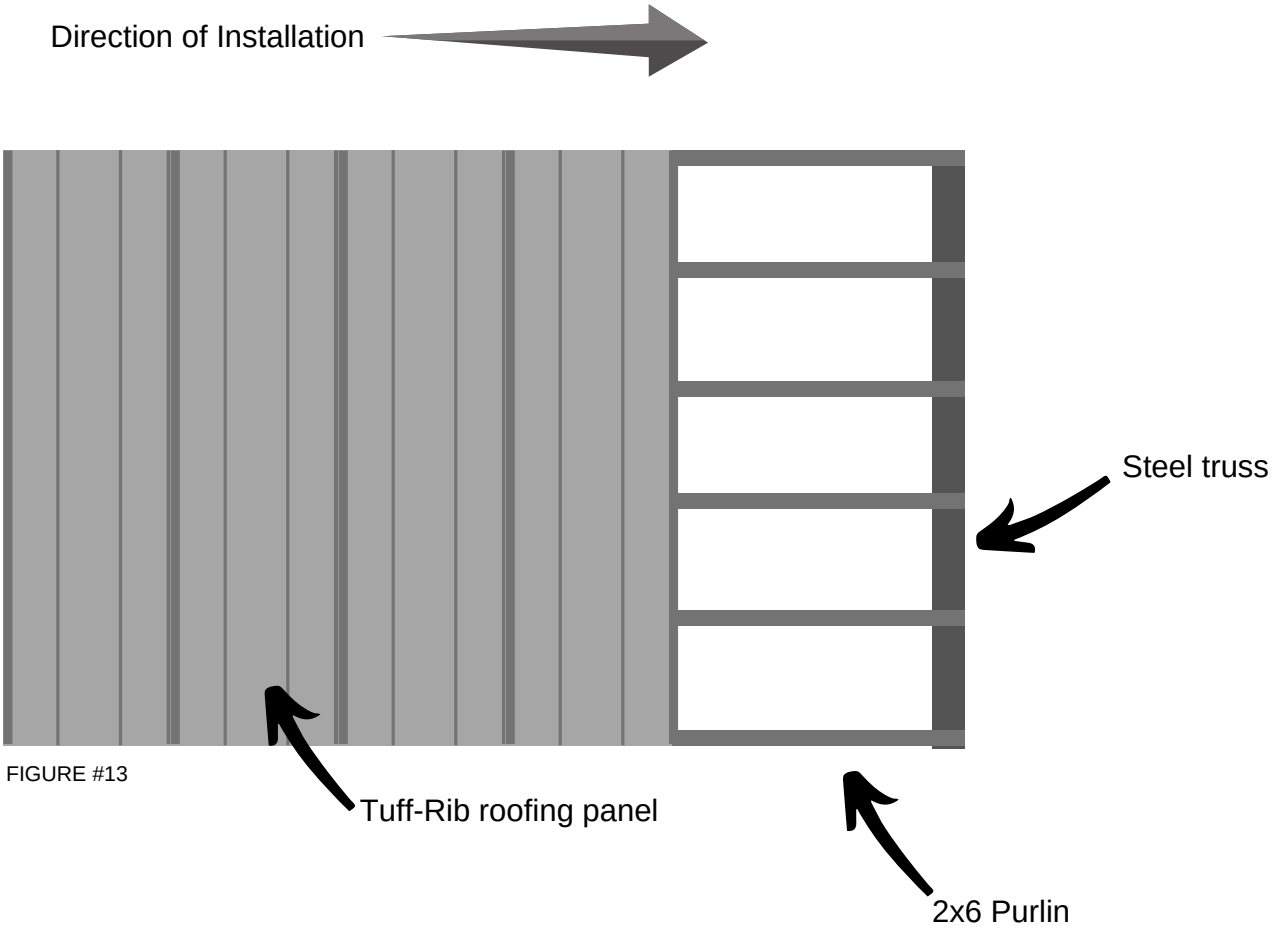
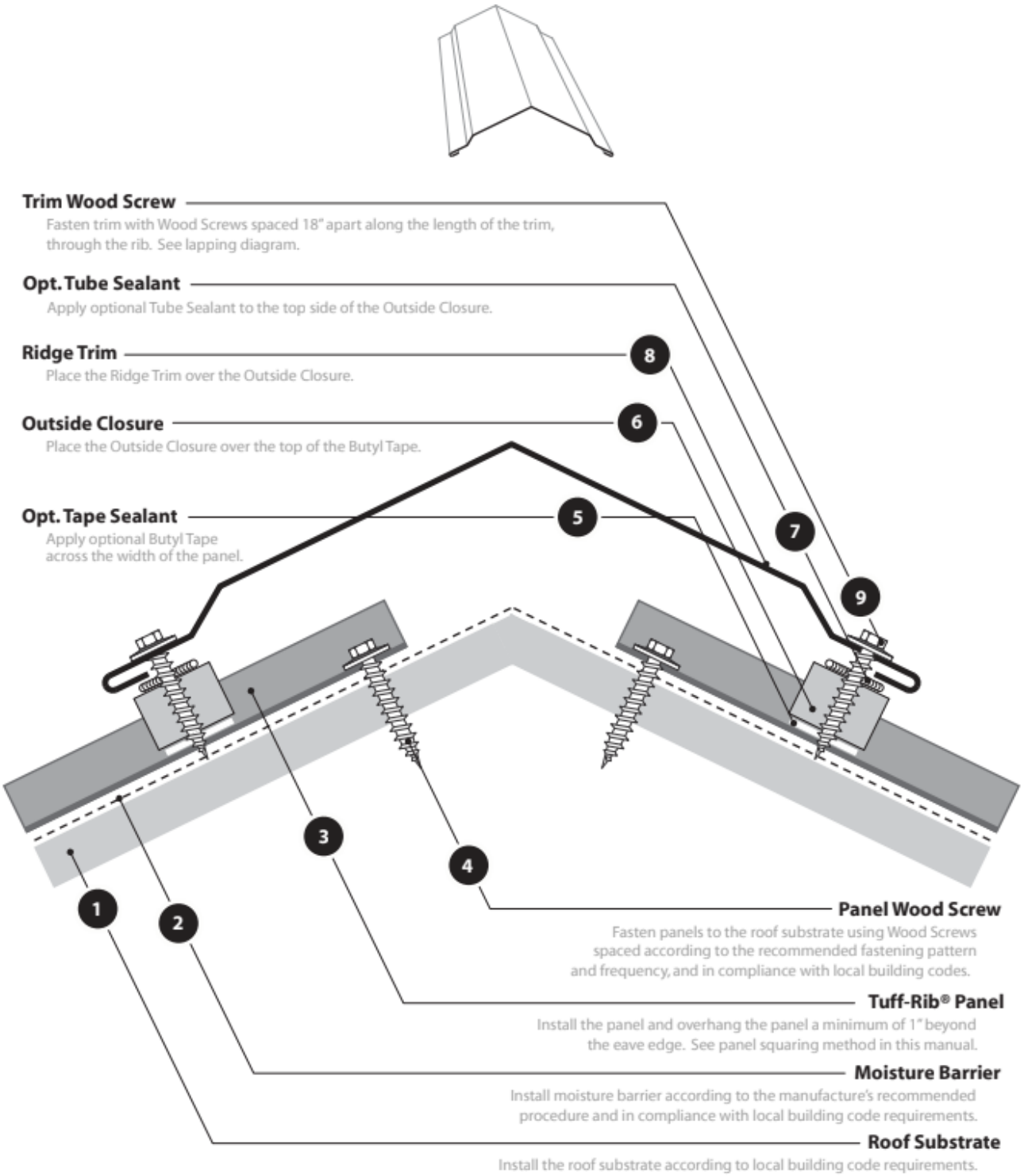


FIGURE #13

RIDGE CAP INSTALLATION

Numbers indicate suggested trim assembly sequence.



Trim Wood Screw
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram.

Opt. Tube Sealant
Apply optional Tube Sealant to the top side of the Outside Closure.

Ridge Trim
Place the Ridge Trim over the Outside Closure.

Outside Closure
Place the Outside Closure over the top of the Butyl Tape.

Opt. Tape Sealant
Apply optional Butyl Tape across the width of the panel.

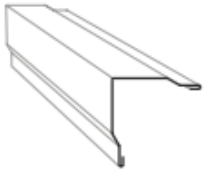
Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

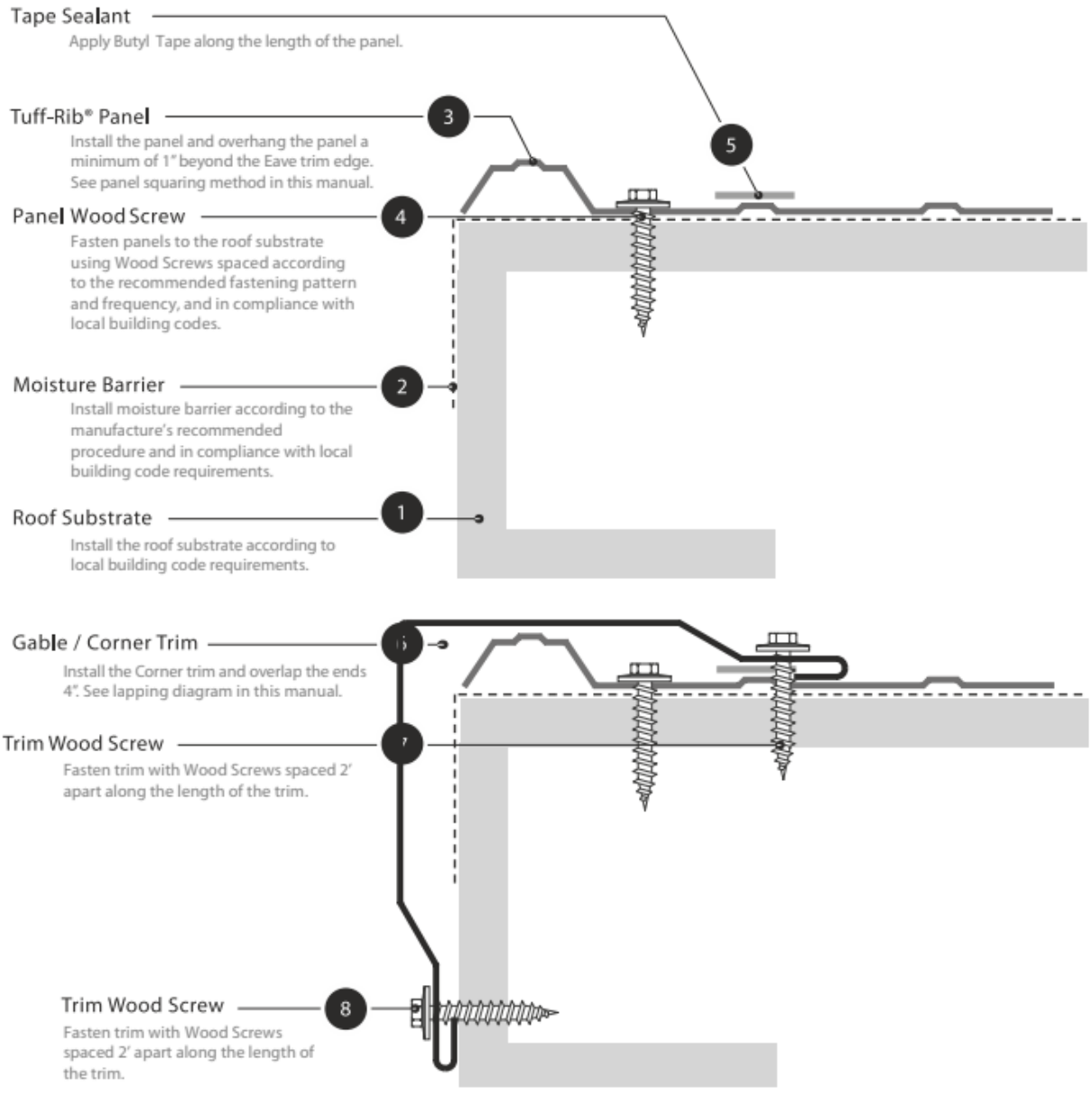
Tuff-Rib® Panel
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

Moisture Barrier
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

Roof Substrate
Install the roof substrate according to local building code requirements.

RAKE TRIM INSTALLATION





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